SASKATCHEWAN

Hairy Prairie Clover

Status: Endangered

(Dalea villosa var. villosa)
(synonym : Petalostemon villosus or villosum or Petalostemum villosum)

Species at Risk

photo by Sheila Lamont © SERM

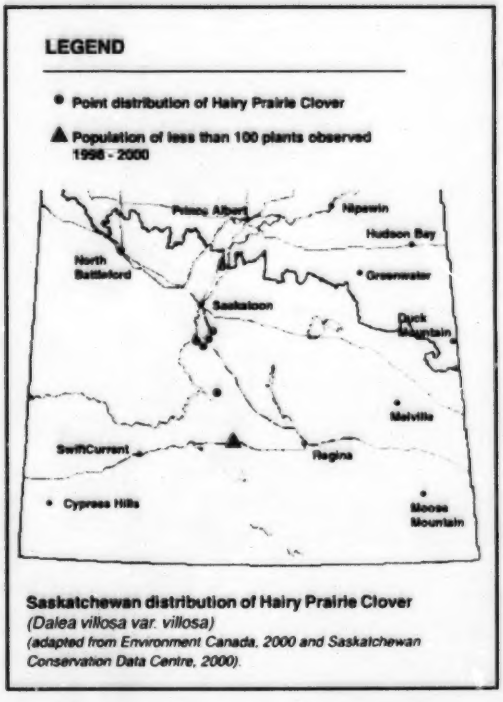
Hairy Prairie Clover in seed

Description

Plant: Another common name is Silky Prairie-Clover. Hairy Prairie Clover is a perennial species of the Fabaceae (Leguminosae) or Pea (or Bean or Pulse) family. The plant's stems grow along the ground to lengths of 30 to 60 centimetres. A red or red-brown woody tap root anchors the plant. The foliage has dense, long hairs which makes the plant feel like velvet. The leaves are alternate and crowded. They are between three and five centimeters long. Each leaf consists of an odd number, between 11 and 21, elliptical leaflets (separate parts of the blade of a compound leaf). These leaflets are closely placed along both sides of a midrib, with one extending at the tip. Each leaflet is not flat, but folded along the center at about a 20 degree angle. Leaflets are five to 11 millimeters long.

Flowers: The flowers are grouped in cylindrical spikes at the ends of the stems and branches. The flower spikes have short stalks (compared to others species of prairie clover) up to 2.5 centimetres long. The flowers are pale rose-purple or rarely white. Each flower has a single petal four to six millimetres long by two millimetres wide. This petal is somewhat heart-shaped at the top, but narrows to a slender stalk at the base, which attaches inside the calyx. Four additional narrow petal-like structures are attached between the five stamens, forming a tube at the base.

Seeds: The dense flower spikes lengthen and fatten as the seeds are forming. They can reach three to 12 centimetres long and 0.7 to one centimetre across. The petals soon fall from the flowers, and the fruits forming within mature into small egg-shaped pods, each three millimetres long. Each pod contains one or two seeds.



Saskatchewan distribution of Hairy Prairie Clover
(Dalea villosa var. villosa)
(adapted from Environment Canada, 2000 and Saskatchewan Conservation Data Centre, 2000).

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Hairy Prairie Clover

(Dalea villosa var. villosa)

Plant form *diagram*

stems grow
along the ground

woody, reddish-brown
tap root

alternate leaves means they are not opposite each other

1 cm

each leaf is composed
of 11 to 21 leaflets,
folded around 20 degrees.

This leaf has 13 leaflets,
each 5-11 mm long

leaflet cross-section:

1 cm

buds

open pink flowers

short stalk

Early stage blooming
flower spike

buds

open pink flowers

pods

short stalk

1 cm

x 1

P. Lyzniak - 2001

Late stage blooming
flower spike

Status

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) listed Hairy Prairie Clover as threatened in 2000. Listed as an endangered species in Saskatchewan in *The Wild Species at Risk Regulations*, Hairy Prairie Clover is protected on private, provincial and federal lands under part V of *The Wildlife Act*.

In Canada, Hairy Prairie Clover's distribution is limited to Saskatchewan and Manitoba. It was always considered rare in Saskatchewan. There are two Saskatchewan populations. One occurs south of Saskatoon and consists of only a few hundred plants. The site near Mortlach/ Caron has had a population of less than a hundred plants when partially surveyed in 1998, 1999 and 2000.

In Manitoba, Hairy Prairie Clover is found in the southwest corner of the province in the Lauder Sand Hills, Spruce Woods Provincial Park, Spirit Sands and the Camp Shilo Military Reserve. Two Manitoba populations have already been lost, and the current provincial population is estimated at a few thousand.

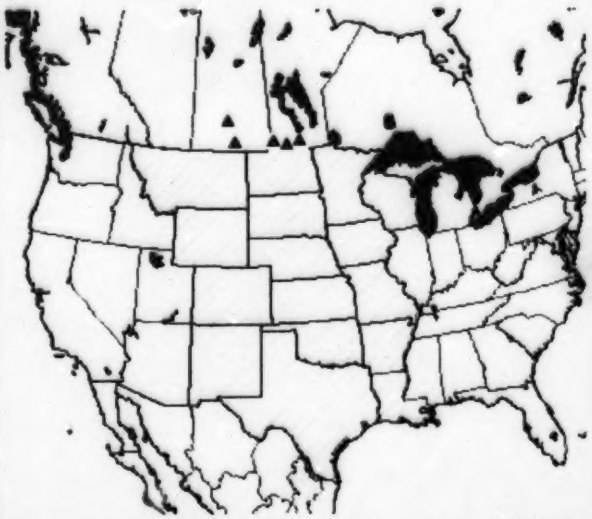
Distribution of Hairy Prairie Clover in the United States spans from Michigan to Montana, south to New Mexico and Central Texas. The plant is recognized as endangered in Montana, Michigan and Iowa.

North American Distribution of the Hairy Prairie Clover
(*Dalea villosa var. villosa*)

LEGEND

States reporting populations of Hairy Prairie Clover 1997-2000

▲ Canadian populations of Hairy Prairie Clover



(adapted from Environment Canada, 2000, Smith, 1997 and Saskatchewan Conservation Data Centre, 2000).

Habitat

Hairy Prairie Clover is found in the Mixed Grassland Region within Canada. The plant is only found in sandhill communities where rapid soil drainage and sun exposure are present. Hairy Prairie Clover may be found on partially stabilized sand, but some degree of drifting sand must usually be present in order for the plant to grow.

The dune blowouts at Mortlach, Saskatchewan, have been stabilized for some time. The population seems to be stable even with a sheep grazing regime being used which rotates the season when the pastures are used. This allows flowering and seed production to occur in at least some years.

Life Cycle

Hairy Prairie Clover is a perennial species that flowers from late July to August. These flowers differ from other peas and beans in structure, and the processes of pollination are not known. The plant sets seed in late August to September. In August 2000, most pods had fallen from the plants well before the end of August. Wind and small mammals play a part in seed dispersal.

Limiting Factors and Recovery Needs

It is generally thought that loss of habitat is the major factor causing the decline of Hairy Prairie Clover. In Saskatchewan, sand dunes are generally not cultivated for crops.

Regular monitoring of the populations is required to ensure they maintain their numbers and that no threat to their survival has developed, especially with the Mortlach population, which is found on stabilized dunes.

Leafy Spurge (*Euphorbia esula*) is an exotic weed that is currently threatening the Lauder Sand Hills' population in Manitoba. Leafy Spurge spreads very quickly and, once established, it excludes other forms of vegetation. Leafy Spurge should be controlled.

Recovery Actions

There is currently no national recovery plan for Hairy Prairie Clover.

Manitoba is presently conducting research on the species. The Manitoba Conservation Data Center is currently monitoring the plant's range, life cycle in relationship to the climate and its environment (the plant's phenology), population size and area, reproduction, and threats to population.

In Saskatchewan, the plant has been protected since 1999 under part V of *The Wildlife Act*. The Saskatchewan Conservation Data Centre is currently monitoring the known Mortlach Sandhills population, recording phenology

and planning an inventory of known populations and sites for 2001.

Regulation on development of sand dune habitat would prevent possible conversion to crop land. Management of the habitat should also include preventing sand dune stabilization by vegetation.

In many cases, the entire ecosystem is endangered and not just a specific species. These ecosystems are fragile and must remain undisturbed. The continued survival of all endangered species relies on protecting the habitats of the species at risk as well as the species themselves.

Important: All endangered species including plants are protected in *The Wild Species at Risk Regulations*, under part V of *The Wildlife Act*. Hairy Prairie Clover is protected on private, provincial and federal lands. It is unlawful to pick or collect endangered plants, or seeds of endangered plants, without a special permit.

If you find Hairy Prairie Clover growing in the wild, please contact the Saskatchewan Conservation Data Center online at www.biodiversity.sk.ca.

Selected References

Please contact your local library or visit the Internet sites below for more information on Hairy Prairie Clover.

Environment Canada. 1999. Hairy Prairie Clover. [Online]
http://www.speciesatrisk.gc.ca/Species/English/SearchDetail.cfm?SpeciesID=533
Last visited: March 16, 2001

Environment Canada. 2000. All species at risk (Map). [Online]
http://www.sis.ec.gc.ca/cgi-eas/endanew.exe
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Smith, Bonnie. 1997. Status report on hairy prairie clover (*Dalea villosa var. villosa*).
The Status of Endangered Wildlife in Canada. 27pp.

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